

The Less Volatile U.S. Economy

Observers of the economy have clearly documented that U.S. aggregate output has become much less volatile since the early 1980s. The accompanying chart plots the annualized standard deviation of quarterly growth of real gross domestic product (GDP) using a 60-quarter rolling window. The value corresponding to 1962:Q2 is the standard deviation of GDP growth between 1947:Q3 and 1962:Q2, for example. The downward movement in output volatility is particularly pronounced after 1984: The standard deviation of economic growth declined sharply from over 4 percent to about 2 percent in recent years.

Economists have put forth three explanations why output growth may have become more stable in the past 20 years. One focuses on the conduct of monetary policy and the accompanying decline in inflation. Prior to the early 1980s, the Federal Reserve relied at times on recessions to rein in inflation. Since then, the Federal Reserve has been proactive in keeping inflation contained. Another explanation is that the U.S. economy simply has enjoyed good fortune in that there have been, for example, fewer tumultuous oil price shocks, which can cause volatility in economic activity. The third explanation suggests that improvements in inventory management are important for understanding the reduction in volatility. That is, while the durable goods sector has experienced a dramatic decline in output volatility in the past two decades, final sales of durable goods have seen only a moderate decline in volatility. Therefore, durable goods inventories—the difference between production and final sales—account for a substantial reduction in output variability in the durable goods sector and in the aggregate economy.

Stock and Watson (2002) conduct a comprehensive analysis on this issue and provide some insights on the relative importance of the three hypotheses in

explaining the decline in output volatility.¹ Their results indicate that improved monetary policy could account for 20 to 30 percent of the volatility reduction and that smaller shocks probably account for most of the rest. However, they acknowledge that their conclusions are tentative and are open to further investigation.

The fact that U.S. output growth is more stable now than it was two decades ago has important implications in interpreting economic data. For example, in the 1970s, changes in annualized GDP growth that seem large by today's standards were, back then, within one standard deviation of the mean and thus policymakers could consider them noise. In contrast, a shock to output growth of a similar magnitude today would be cause for believing that the economy might be near a business cycle turning point and would be more likely to elicit a prompt response from monetary policymakers. Perhaps for this reason, Federal Reserve policymakers began cutting the federal funds rate aggressively in January 2001, based on a slowing economy that would not actually enter a recession until March 2001.

—Hui Guo

¹Stock, James and Watson, Mark. "Has the Business Cycle Changed and Why?" in Mark Gertler and Kenneth Rogoff, eds., *NBER Macroeconomics Annual*, 2002. Cambridge, MA: MIT Press, pp. 159-218.

**Rolling Standard Deviation of GDP Growth:
1962:Q2 to 2003:Q2**

